

CLAIMS

1. An isolated DNA having the nucleotide sequence of SEQ ID NO:1.

2. A nucleic acid molecule having a sequence that is the same as or is complementary to a sequence of any 8 or more contiguous nucleotides of the DNA of SEQ ID NO:1.

3. A nucleic acid molecule of claim 2, wherein the sequence is the same as or complementary to a sequence of any 13 or more contiguous nucleotides of the DNA or SEQ ID NO:1.

4. A plant cell transformed with the DNA of claim 1, 2 or 3 under control of a operative plant-active promoter.

5. A method for altering growth or development of a plant containing an SPS gene, which comprises modulating expression of the SPS gene.

6. The method of claim 5, in which SPS expression is reduced by transforming the plant with a nucleic acid operatively linked to a plant-active promoter wherein the nucleic acid encodes an antisense RNA or a ribozyme which inhibits expression of the SPS gene.

7. The method of claim 5, in which SPS expression is increased by transforming the plant with an SPS gene operatively linked to a plant-active promoter.

8. A method for isolating a plant gene that encodes a cytokinin-metabolizing enzyme, which comprises identifying in the genome of said plant a coding sequence, having at least about 80% homology to SEQ ID NO:1; and preparing a nucleic acid having said coding sequence.

9. The method of claim 8, wherein the coding sequence has at least about 90% homology to SEQ ID NO:1.

5 10. A method for isolating a plant gene that encodes a cytokinin-metabolizing enzyme, which comprises amplifying a target sequence in the genome of said plant using as primers two different nucleic acid molecules as defined in claim 3; identifying the gene having said coding sequence and preparing a nucleic
10 acid having the coding sequence of said gene.